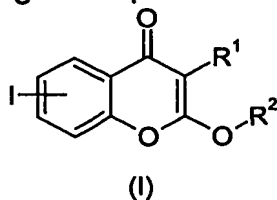


**CLAIMS**

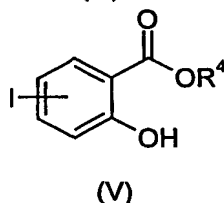
1. A method for preparing a compound of formula (I)



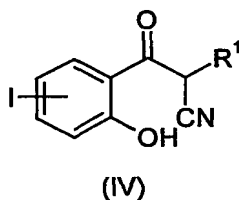
according to the following steps:

**step A:**

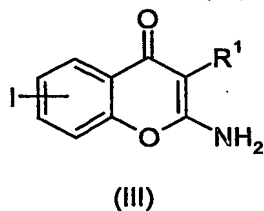
reaction of a compound of formula (V)



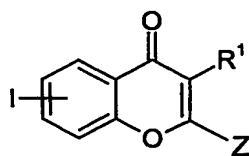
with a nitrile of formula  $R^1CH_2CN$  and a base to form the compound of formula (IV);

**step B:**

compound of formula (IV) which is then cyclized in an aqueous acid medium to form the compound of formula (III):

**step C:**

compound of formula (III) which gives the compound of formula (II) via a diazotization reaction by means of a compound chosen from sodium nitrite in the form of a mixture with an acid, alkyl nitrites, alkyl thionitrites and alkyl thionitrates, and decomposition by means of a compound  $AZ_n$ ;



(II)

**step D:**

compound of formula (II) which gives the compound of formula (I) by the action of an alcohol in the form of a mixture with a base;

in the formulae (I) to (V)

- $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$ , which are identical or different, represent a  $C_1$ - $C_{10}$  alkyl,  $C_1$ - $C_{10}$  alkenyl or  $C_1$ - $C_{10}$  alkynyl, one or more carbo- or heterocycles having 5 to 7 atoms, it being possible for these groups to be substituted or unsubstituted;
- A represents a metal or a metal salt;
- Z represents a group chosen from Cl, Br or  $-OR^3$ ;
- n is equal to 0, 1 or 2.

2. A method according to claim 1, for which the base used during step A is lithium diisopropylamide.

3. A method according to claims 1 or 2, for which the acid used during step B is acetic acid.

4. A method according to 1 to 3, for which A is copper.

5. A method according to 1 to 4, in which step C uses t-butyl or methyl nitrite.

6. A method according to claims 1 to 4, for which  $AZ_n$  represents  $Cu(OR^3)_2$  or  $CuCl_2$ .

7. A method according to claims 1 to 4, in which step C uses t-butyl or methyl nitrite and for which  $AZ_n$  represents  $Cu(OR^3)_2$  or  $CuCl_2$ .

8. A method according to claims 1 to 4, in which step C uses sodium nitrite in the form of a mixture with HCl or  $H_2SO_4$ .

9. A method according to claims 1 to 4, for which  $AZ_n$  represents  $Cu(OR^3)$  or  $CuCl$ .

10. A method according to claims 1 to 4, in which step C uses sodium nitrite in the form of a mixture with  $HCl$  or  $H_2SO_4$  and for which  $AZ_n$  represents  $Cu(OR^3)$  or  $CuCl$ .

11. A method according to claims 1 to 10, in which step D uses an alcohol of formula  $R^2OH$  in which  $R^2$  is a  $C_1$ - $C_{10}$  alkyl.

12. A method according to claim 11, for which  $R^2$  represents n-butyl.

13. A method according to claims 1 to 11, in which step D is replaced by step D' and in which there is used a compound of formula (II) in which Z represents a group  $-OR^3$ , which is displaced by a similar, more appropriate group.

14. A method according to claim 13, for which Z is the ethoxy group which is displaced by a butoxy group introduced by treating with sodium butoxide.

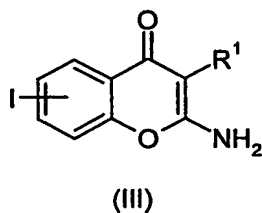
15. A method according to claims 1 to 14, in which step A is replaced by step A' and in which there is used a nitrile of formula  $R^1CXHCN$ , in which X represents a halogen atom, with, as base, a metal chosen from magnesium or zinc.

16. A method according to claims 1 to 15, for which the following characteristics are present alone or in combination:

- the iodine atom is in the 6-position of the chromone;
- $R^1$  represents a  $C_1$ - $C_{10}$  alkyl, preferably an n-propyl;
- $R^2$  represents a  $C_1$ - $C_{10}$  alkyl, preferably an n-butyl;
- $R^4$  represents a  $C_1$ - $C_{10}$  alkyl, preferably a methyl;
- A represents Cu;
- Z represents Cl or Br, or the group  $-OR^3$  in which  $R^3$  represents a methyl or n-butyl group.

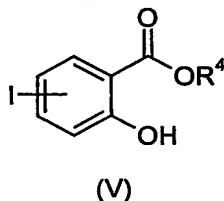
17. The method as claimed in any one of claims 1 to 16, for which the preparation of a compound of formula (I) in which  $R^1$  represents an n-propyl and  $R^2$  represents an n-butyl.

18. A method for preparing a compound of formula (III)

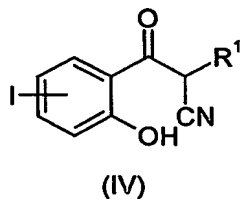


according to the following steps:

reaction of a compound of formula (V)



with a nitrile of formula  $R^1CH_2CN$  and a base to form the compound of formula (IV);

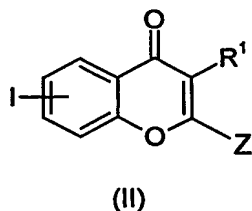


which compound of formula (IV) is then cyclized in an aqueous acid medium to form the compound of formula (III);

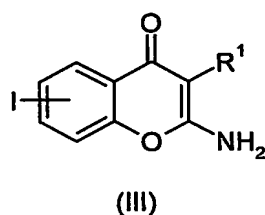
in formulae (III) to (V)

- $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$ , which are identical or different, represent a  $C_1$ - $C_{10}$  alkyl,  $C_1$ - $C_{10}$  alkenyl or  $C_1$ - $C_{10}$  alkynyl, one or more carbocyclic heterocycles having from 5 to 7 atoms, it being possible for these groups to be substituted or unsubstituted.

19. A method for preparing a compound of formula (II)



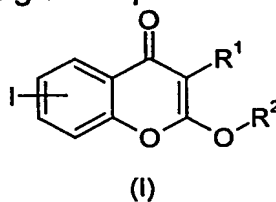
from a compound of formula (III) which gives the compound of formula (II) via a diazotization reaction



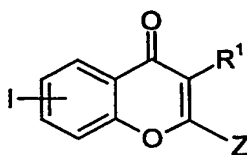
by means of a compound chosen from sodium nitrite in the form of a mixture with an acid, alkyl nitrites, alkyl thionitrites and alkyl thionitrates; and decomposition by means of a compound  $AZ_n$ ; in the formulae (II) and (III)

- $R^1$  and  $R^3$ , which are identical or different, represent a  $C_1$ - $C_{10}$  alkyl,  $C_1$ - $C_{10}$  alkenyl or  $C_1$ - $C_{10}$  alkynyl, one or more carbo- or heterocycles having 5 to 7 atoms, it being possible for these groups to be substituted or unsubstituted;
- A represents a metal or a metal salt;
- Z represents a group chosen from Cl, Br or  $-OR^3$ ;
- n is equal to 0, 1 or 2.

20. A method for preparing a compound of formula (I)



from a compound of formula (II) which gives the compound of formula (I)

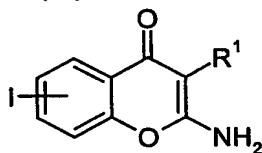


(II)

by the action of an alcohol in the form of a mixture with a base;  
in the formulae (I) and (II)

- $R^1$  and  $R^2$ , which are identical or different, represent a  $C_1$ - $C_{10}$  alkyl,  $C_1$ - $C_{10}$  alkenyl or  $C_1$ - $C_{10}$  alkynyl, one or more carbo- or heterocycles having 5 to 7 atoms, it being possible for these groups to be substituted or unsubstituted;
- Z represents a group chosen from Cl, Br or  $-OR^3$ .

21. A compound of formula (III)



(III)

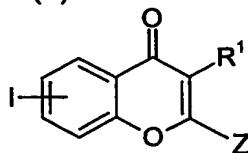
in which  $R^1$  represents a  $C_1$ - $C_{10}$  alkyl,  $C_1$ - $C_{10}$  alkenyl or  $C_1$ - $C_{10}$  alkynyl, one or more carbo- or heterocycles having from 5 to 7 atoms, it being possible for these groups to be substituted or unsubstituted.

22. The compound as claimed in claim 21, of formula (III) in which the following characteristics are present alone or in combination:

- the iodine atom is in the 6-position of the chromone;
- $R^1$  represents a  $C_1$ - $C_{10}$  alkyl group.

23. The compound as claimed in either of claims 21 and 22, of formula (III) in which  $R^1$  represents the n-propyl group.

24. A compound of formula (II)



(II)

in which

- $R^1$  and  $R^3$ , which are identical or different, represent a  $C_1$ - $C_{10}$  alkyl,  $C_1$ - $C_{10}$  alkenyl or  $C_1$ - $C_{10}$  alkynyl, one or more carbo- or heterocycles having 5 to 7 atoms, it being possible for these groups to be substituted or unsubstituted;
- Z represents a halogen atom.

25. A compound according to claim 24, of formula (II) in which the following characteristics are present alone or in combination:

- the iodine atom is in the 6-position of the chromone;
- $R^1$  represents a  $C_1$ - $C_{10}$  alkyl group.

26. A compound according to claims 24 and 25, of formula (II) in which  $R^1$  represents an n-propyl group and Z represents chlorine or bromine.